

APPENDIX

TABLE 1 - Sacramento River Levee System - Current Erosion Sites - 2005

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Table 1. Sacramento River Levee System - Current Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

Includes Inventoried Erosion Sites from 1997-2004 (Revised)

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Bear	2.4	Left	115*	114*		152	Berm	Toe Erosion, Upper Bank Slope	None	Near	50	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Part of existing site; Sandy banks are actively eroding and has worsened since last year.)	---
Bear	9.9	Right	117*	118*		152	Upper Bank	Toe Erosion, Upper Bank Slope	Riprap	Near	0-30	DID NOT OBSERVE. (2002 Note: No berm to about 10'; Site has been rocked, upper bank rocked but is sliding down; There are two erosion scallops at toe of slope.)	---
Bear	10.1	Right	116*	117*		213	Berm	Toe Erosion, Upper Bank Slope	None	Near	0	***CRITICAL*** DID NOT OBSERVE. (2002 Note: No berm; 1;1 OR 1.5:1slope from toe of levee to river bottom; No rock protection.)	---
Cache Creek	LM 0.8	Right	75*	72*		1100	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	140	DID NOT OBSERVE.	---
Cache Creek	LM 0.8	Left			76*	350	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	60	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Erosion extends 150' US and 200' DS of WPT.)	---
Cache Creek	LM 1.1	Left			85*	525	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	90	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Erosion extends 150' US and 375' DS of WPT.)	---
Cache Creek	LM 1.8	Right	68*	63*		249	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	160	DID NOT OBSERVE.	---
Cache Creek	LM 2.4	Left			86*	570	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	90	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Erosion extends 240' US and 3300' DS of Wpt.)	---
Cache Creek	LM 2.8	Left	87*			1100	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	130	DID NOT OBSERVE.	---
Cache Creek	LM 3.4	Left			106*	470	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	165	DID NOT OBSERVE. (2002 Note: Erosion extends 200' US and 270' DS of Wpt.)	---
Cache Creek	LM 3.6	Right			62*	200	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	60	<u>Removed from Critical list</u> -see Corps Inspection Memo of 10/13/05 DID NOT OBSERVE.	---
Cache Creek	LM 3.9	Left			107*	350	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	130	DID NOT OBSERVE. (2002 Note: Erosion extends 200' US and 150' DS of Wpt.)	---
Cache Creek	LM 4.2	Left			112*	710	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	130	DID NOT OBSERVE. (2002 Note: Erosion extends 360' US and 350' DS of Wpt.)	---

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Cache Slough	15.5	Left			366	10	Scallop	Wave wash	New stone failing in places	In	1-2	NEW SITE - Large vertical sections due to wave wash. New stone dumped on bank with geotextile exposed. Cohesive toe has thin weak stratigraphic unit that is washing out. Poor design/construction of stone revetment.	D4P13
Cache Slough	15.9	Left	364	365		300	Toe	Wave wash	New stone failing in places	In	1-2	NEW SITE - Large vertical sections due to wave wash. New stone dumped on bank with geotextile exposed. Cohesive toe has thin weak stratigraphic unit that is washing out.	D4P11 D4P12
Cache Slough	21.8	Right	551	552	363 (at 10m pocket)	485 (?)	Whole Bank and toe	Rotational failure, fluvial toe erosion	None	In	0	***CRITICAL*** Reach is not 485m long, mainly numerous small pockets. Still looks bad. No grass on levee slopes now (has been graded).	D4P9 at 10m pocket at WPT
Cache Slough	23.6	Right		135		400	Scallops and toe	Wave wash and geotechnical failures	None	In	0	NEW SITE (This site appears on atlas and waypoint is in GPS , but is not in inventory - need to put back into inventory)	D4P10 at D/S end
Elk Slough		Both			40 41	(10 each)	Levee slope	Mass failure	None	In	0	No Observed changes. Both banks are still oversteeped in most places and potentially susceptible to geotechnical failures.	D4P8 of left bank
Feather	0.6	Left			522	10	Toe	Scour	Cobble	In	5	No Observed changes.	D5P1
Feather	1	Left	531		532	200	Toe	Scour	None	Near	5	No observed changes.	D5P2
Feather	3.5	Left			217	15	Whole Bank	Rotational Failure	None	Near	< 8	Some additional slope erosion and a tree from slope has fallen into water.	D5P3
Feather	5	Left	13	12	60	150	Berm	Fluvial	None	>10m	>10m	No observed changes.	D5P4
Feather	7	Left	526		525	125	Toe, Levee slope	Fluvial	Cobble	In		Small amount of additional erosion at waterline. No other observed changes	D5P5
Feather	17.8	Left			553	75-100	Whole Bank	Fluvial, Slope failures	None	Near	>50	***POTENTIALLY CRITICAL*** Some new slumping. Actively eroding wide berm which is >50 feet wide.	D5P6 D5P7

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Feather	19.7	Left			554	100	Whole Bank	Fluvial, Slope failures	None	Near	>50	***POTENTIALLY CRITICAL*** No observed changes (large berm)	D5P8
Feather	37.9	Right				610			None	Near		DID NOT OBSERVE.	---
Georgiana Slough	0.3	Left	432	431		390	Repaired	Repaired	None	In		Most brush boxes are devoid of brush bundles. Some pockets are filled with new stone. No other observed changes.	D4P17
Georgiana Slough	1.7	Left	441	440		320	Toe	Pocket erosion	Rock riprap	In		Some new brush bundles in brush boxes. No other observed changes.	D4P19 at D/S end
Georgiana Slough	2.3	Left	444	442	443	360	Toe, Levee slope	Pocket erosion	Some rock riprap (dumped)	In		Brush boxes don't appear to be working in several places. No other observed changes.	D4P21 at D/S end D4P22 at U/S end
Georgiana Slough	2.5	Left	446	445		100	Toe	Erosion pockets	None	In		Some new brush bundles in brush boxes. No other observed changes.	D4P23
Georgiana Slough	3.6	Left	450	449		365	Levee slope	Erosion pockets	None	In		Some new brush bundles in brush boxes. No other observed changes.	D4P24
Georgiana Slough	3.7	Left	452	451		35	Toe	Erosion pockets	None	In		Some new brush bundles in brush boxes. No other observed changes.	D4P25
Georgiana Slough	3.7	Left			453	10	Toe	Local pocket	None	In		Some new brush bundles in brush boxes. No other observed changes.	D4P26
Georgiana Slough	4	Left	455	454		145	Levee	Fluvial	Rock riprap	In		New brush boxes installed. No other observed changes.	D4P27 D4P28

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Georgiana Slough	4.3	Left	458	456	457	280	Toe	Erosion pockets	Rock riprap	In		Some new brush boxes installed. Some boxes are devoid of brush bundles. Levee slopes and banks still look bad with pocket scallops into levee slopes.	D4P29 D4P30 D4P31
Georgiana Slough	4.5	Left	460	368	459	150	Toe	Wave wash and Pocket erosion	None	In	0	Revised - Extended reach from downstream side of bridge. Whole bank is vertical. No other observed changes.	D4 P32
Georgiana Slough	4.6	Left	461	460		305	Toe	Pocket erosion	None	In		No observed changes	D4P33
Georgiana Slough	5.3	Left	465	464		940	Levee slope	Erosion pockets	None	In		Some new brush bundles in brush boxes. Some boxes missing brush bundles. Some boxes too low relative to high tide. No other observed changes.	D4P35 at D/S end D4P36 at middle D4P37 at U/S end
Georgiana Slough	6.1	Left	416	417		560	Levee toe, Berm slope	Deep pockets	Some rock riprap	In (in spots)	3	Some new brush bundles in brush boxes. Some boxes missing brush bundles. Some boxes too low relative to high tide. No other observed changes.	D4P38 at U/S end
Georgiana Slough	6.4	Left	413	415		160	Repaired	Repaired	None	In	3	No observed changes.	D4P39
Georgiana Slough	6.6	Left	411	412		120	Levee	Deep pockets	None	In		Some stone sliding off underlying geotextile fabric. No other observed changes.	D4P40
Georgiana Slough	6.8	Left	409	410		350	Levee slope	Deep pockets	None	In	5	No observed changes.	D4P41 at D/S end

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Georgiana Slough	7	Right	407	408		165	Toe	Scour	Rock riprap	In		Stone revetment in between pockets. No other observed changes.	D4P42 at U/S end
Georgiana Slough	7.3	Left	404	405		165	Levee	Large pocket	None	In		No observed changes.	D4P43
Georgiana Slough	7.7	Right			403	10	Repaired	Repaired	None	Near	7	Some new brush boxes. No other observed changes.	D4P44
Georgiana Slough	8.1	Right	399	400		70	Levee toe, Berm slope	Erosion pockets	Rock riprap	In	3	No observed changes.	D4P45
Georgiana Slough	8.3	Left	397	398		40	Levee slope	Fluvial	None	In	5	No observed changes.	D4P46
Georgiana Slough	8.4	Left	395	396		300	Levee slope	Erosion pockets	None	In	5	No observed changes.	D4P47 at D/S end
Georgiana Slough	8.7	Left	393	394		35	Levee toe, Berm slope	Fluvial, some deeper pockets	None	In	9	No observed changes.	D4P48

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Georgiana Slough	9.3	Left	387	388		200	Levee	Fluvial	Rock riprap	In		Upstream 200 feet removed because of presence of wide berm. No other observed changes.	D4P50
Georgiana Slough	10.3	Left	381	382		75	Levee toe, Berm slope	Fluvial	None	In	5	No observed changes.	D4P51
Georgiana Slough	10.4	Left	379	380		70	Levee toe, Berm slope	Fluvial	None	In	3	No observed changes.	D4P52
Georgiana Slough	10.6	Left	377	378		95	Levee	Fluvial	None	In		No observed changes.	D4P53
Georgiana Slough	10.9	Left	375	376		105	Berm or Levee slope	Fluvial	None	In or near	9	No observed changes.	D4P54
Georgiana Slough	11.6	Left	373	374		195	Levee toe, Berm slope	Fluvial	None	In	4	No observed changes.	D4P55
Lower American	2.5	Left					Levee Slope	erosion of waterside slope				DID NOT OBSERVE.	---
Lower American	8	Right					Levee Slope	erosion of waterside slope				DID NOT OBSERVE. (2003 Note: Site classified as a FEMA erosion site from the Ayres, July 2004.)	---
Lower American	9	Right					Slope, Toe	slope and toe erosion, then slope failure				DID NOT OBSERVE. (2003 Note: Site classified as a FEMA erosion site from the Ayres Associates, July 2004 Report.)	---
Lower American	9.7	Left				1530			None	Near		DID NOT OBSERVE. (2003 Note: Site classified as a FEMA erosion site from the Ayres Associates, July 2004 Report.)	---
Sacramento	8	Left			243	150	Levee slope	Waves, Drawdown	Riprap - low	In		Revised limits - Extended reach because of vertical bank along roadway upstream. No other observed changes.	D4P16
Sacramento	10.8	Left	216	214		500	Mid-bank	Wave Wash	Rock Riprap at Toe	In	0	Spot repaired, but still have eroding toe in several places.	D4P15
Sacramento	20.8	Left	472	473		120	Partially Repaired	Partially Repaired	None	In		***POTENTIALLY CRITICAL*** Some new erosion into levee section. No other observed changes.	D3P62 at U/S end
Sacramento	21.5	Left	470	471		65	Partially Repaired	Partially Repaired	Rock riprap	In		No observed changes.	D3P61
Sacramento	22.5	Left	293	292		260	Berm	Fluvial, Mass failure, Wave wash		Near	3	Some new minor stone revetment at upstream end. Brush boxes present. No other observed changes.	D3P59 D3P60 at D/S end

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Sacramento	22.7	Left	295	294		65	Berm	Fluvial, Mass failure, Wave wash		Near	0	Brush boxes present. No other observed changes.	D3P58
Sacramento	23.2	Left	297	296		145	Berm	Fluvial, Mass failure, Wave wash		Near	3	Empty brush boxes present. No other observed changes.	D3P56 at U/S end D3P57 at D/S end
Sacramento	23.3	Left	299	298		50	Berm	Mass failure, Fluvial, Wave wash		Near	10-15	Brush boxes present. No other observed changes. Large berm is present.	D3P55
Sacramento	24.8	Left	534	300		115	Berm slope	Mass failure, Fluvial, Wave wash		In	3	Brush boxes present. No other observed changes.	D3P54 at U/S end
Sacramento	25.2	Left	536	56	535	Variable	Berm slope	Mass failure, Fluvial, Wave wash	Rock riprap	Near	3	Brush boxes present. No other observed changes.	D3P53 at middle
Sacramento	26	Left	466	467		420	Partially Repaired	Partially Repaired	None	In at D/S end	0-15	Lots of old brush boxes, some with established vegetation in area behind box. No other observed changes.	D3P51 at U/S end D3P52 at D/S end
Sacramento	26.5	Left	103	102		140	Toe, Levee slope	Toe scour	Riprap	In		***POTENTIALLY CRITICAL*** No observed changes.	D3P 46 at U/S end D3P47 at D/S end
Sacramento	26.9	Left	105	104		85	Toe	Toe scour	Cobble	In	0	***CRITICAL- 42F SITE*** Currently trimming trees and clearing bank. Still looks bad.	D3P45
Sacramento	31.6	Right	236	238		100	Levee slope	Fluvial	Riprap	In		Downstream 100-125m have been repaired. No other observed changes.	D3P43 at U/S end
Sacramento	32.5	Right	276	277		565	Toe, Levee slope	Fluvial, Mass failure	Intermittent rock riprap, concrete rubble	In	0	***CRITICAL*** Looks worse at the upstream end because of road work along the top of the slope. Downstream end appears about the same. No other observed changes at downstream end.	D3P42 at U/S end
Sacramento	33	Right		557	274	100	Toe, Lower bank slope	Tree popouts, Rotational failures, wave wash	Rock Riprap	In	0	Looks worse because vegetation disturbance has damaged surface soils and resulted in dry ravel of sandy slope.	D3P41
Sacramento	34.5	Right	231	232		130	Partially Repaired	Partially Repaired	Concrete rubble	In		***CRITICAL*** Upstream end has been repaired, but rock is sliding off the cohesive bench at the waterline. Downstream end is not repaired.	See 2004 D3P34

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Sacramento	35.4	Right			273	100	Pocket, Toe	Wave wash, Tree popouts	Riprap	In	0	NEW SITE - Three pockets of erosion into levee section due to popouts or mass failures. Stone is present along waterline. Riprap is present upstream and downstream of site.	D3P40
Sacramento	35.4	Left	250	247		40	Toe, Lower bank slope	Eddy and wave wash	Rock Riprap (?)	In	0-3	Looks a little worse. Two major holes with vertical banks and smaller intermittent pockets in between. Stone is present upstream, downstream and at toe.	D3P38 at U/S end D3P39 at D/S end
Sacramento	38.5	Right	219	218		75	Partially Repaired	Partially Repaired	Riprap	In		No observed changes.	D3P37 at U/S & D3P36
Sacramento	41.9	Right	360	215		400	Structural problem	Mass Failures	Cobble (short section)	In		New brush boxes at waterline for several hundred feet downstream. No toe or bank protection present. No other observed changes.	D3P32 D3P33
Sacramento	43.3	Right	210	213		325	Levee slope	Fluvial	Concrete rubble, rock, and cobble	In	0	Lots of new nearly full bank stone riprap protection in spots. Site is no longer critical and has been removed from that list, but still need to be monitored since there are some unprotected pockets.	D3P30 view D/S D3P31 at middle
Sacramento	43.7	Right	208	209		340	Partially Repaired D/S; Toe, Levee slope	Partially Repaired D/S; Fluvial at U/S 20m section	None D/S; Rock riprap at 20m U/S end	In		No observed changes.	D3P29 at U/S end
Sacramento	44.7	Right	206	207		430	Partially Repaired	Partially Repaired	None	In		Some new erosion in pockets and caves under trees are exposed.	D3P28 at U/S end
Sacramento	47.0	Left			246	300	Toe, berm	Fluvial, wave wash	None	In	2-3	NEW SITE - Long reach with eroding vertical silty-sandy berm. Erosion may be into levee toe. No riprap at site but have cobble riprap upstream and rock riprap downstream. Site is just downstream of a stormwater outfall.	D3P27 view D/S
Sacramento	47.9	Right	202			30	Toe, Levee slope	Toe scour	Riprap	In		No observed changes.	D3P26

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Sacramento	48.2	Right			201	20	Toe	Toe scour	Riprap	In		No observed changes.	D3P25
Sacramento	49.6	Left			39	50	Toe, Berm	Fluvial	None	Near	3	***CRITICAL*** No observed changes.	See 2004 D3P21
Sacramento	49.7	Left			359	180	Toe, Berm	Fluvial	None	Very close	5	Revised - Reach should be extended about 100-200m further downstream (to RM 49.6).	D3P24
Sacramento	49.9	Left			198	10	Repaired	Repaired	Riprap	In		***CRITICAL*** No observed changes. Consists mainly of undercut trees with rock riprap upstream and downstream.	D3P23
Sacramento	50	Left			239	approx. 450	Toe, berm, pockets	Fluvial, wave wash	None	Near	9-10	NEW SITE - Eroding wide, sandy-silty berm with vertical face in places and erosion pockets into the berm. There is no revetment in the reach, but there is lots of woody debris along the waterline. Apparent reach = RM 50.2 - RM 49.9.	D3P21
Sacramento	50.2	Left	357	358		200	Berm	Fluvial	None	Near	7-10	***CRITICAL*** Slow erosion, but still have significant berm width. No other observed changes.	D3P22
Sacramento	50.4	Left										***CRITICAL*** DID NOT OBSERVE. USACE identified site.	---
Sacramento	51.1	Left			25	110	Toe, Mid-slope	Fluvial	None	In	0	Revised limits - Extended site about 100m further downstream. No observed changes.	D3P20 at U/S end
Sacramento	51.5	Left	270	271		400	Berm, Levee toe	Fluvial		In or near	2	***POTENTIALLY CRITICAL*** Several trees at downstream end have root masses almost completely exposed, but have wide berm (>10m) at downstream end as well. No other observed changes.	D3P19
Sacramento	52.3	Left	353	354	237	30	Toe, pocket	Fluvial or tree popout	None	In	2-3	NEW SITE - Small pocket in short berm, but is near or just into toe of projected levee slope. No revetment upstream or downstream. May be part of USACE identified site at RM 52.4.	D3P18

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Sacramento	53.1	Left		355		20	Levee slope (upper) and toe	Fluvial	None (Rock riprap U/S and D/S)	In	0-10	***POTENTIALLY CRITICAL *** No observed changes. Stone bench exposed at waterline.	D3P16
Sacramento	53.5	Right	23	5		50	Whole Bank	Fluvial	Concrete Rubble Toe, Old Cobbles above	In	2	No significant change.	D3P15
Sacramento	54.5	Right			235	30	Toe	Fluvial	Riprap	In		NEW SITE - Rock riprap covers levee slope, but is sliding off hard, cohesive, near-vertical toe. Unclear whether tree came out at one spot. Erosion of toe is slow.	D3P14
Sacramento	55.2	Left	353	354		2200	Toe	Fluvial	Old Cobbles	In	0-5	Revised river mile. No significant change. Still have pockets of erosion, but rock bench at waterline is still present.	See 2004 D3P12
Sacramento	55.5	Left				115	Levee slope	Mass failure	Rock riprap	In	5	No observed change.	D3P13
Sacramento	55.8	Right	351	352		260	Levee slope	Fluvial	None	In or near		No significant change, but have more geotextile exposed at upstream end.	D3P11 at U/S end D3P12 at D/S end
Sacramento	56.5	Right	349	350		115	Berm	Fluvial	Rock riprap	Very close	7	No observed change.	D3P10
Sacramento	56.6	Left			269	10	Toe, Levee slope	Fluvial, Mass failure	Concrete rubble	Levee is set back	39	No observed change.	D3P9
Sacramento	56.7	Left	347	348		510	Structural problem	Fluvial	Rock, concrete, and cobble	In		***CRITICAL*** Under repair still. Slope toe is protected by riprap with LWD on bench, but upper slope is still unprotected.	D3P7 view U/S
Sacramento	56.8	Right	345	346		225	Toe, Levee slope	Fluvial, shelf retreat	None	In or near	0	***POTENTIALLY CRITICAL*** Looks worse. Tree has fallen and erosion is into levee toe and possibly as high as mid slope.	D3P6 D3P7 at D/S end

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Sacramento	57	Right		344		50	Toe	Fluvial	None	In		No observed changes.	D3P5
Sacramento	60	Left	337	338		230	Toe, Levee Slope	Fluvial	Concrete Rubble, Coble & Rock	In		Partial Repair - by building oversized levee on landside.	D3P4 view D/S
Sacramento	62.5	Right			334	50	Levee	Fluvial	Rehabilitated cobble with rock riprap	In	0	No observed changes.	D3P3
Sacramento	62.9	Right	332	333		50	Toe	Fluvial	Concrete rubble and cobble	In		No observed changes.	D3P2
Sacramento	63	Right			331	30	Toe	Fluvial	Rock and rubble	In		No observed changes.	D3P1
Sacramento	69.9	Right	325	326		610	Toe, Levee slope	Fluvial	None	In (at U/S end)		***CRITICAL*** No observed changes.	D2P55 at U/S end
Sacramento	70.7	Right	323	324		530	Berm slope	Fluvial	Cobble and rubble	Near	3	No observed changes.	D2P54 at D/S end
Sacramento	71.3	Right	321	322		130	Berm	Scallops	Cobble	Near	8	No observed changes.	D2P53 at D/S end
Sacramento	71.7	Right	319	320		170	Berm	Fluvial	Cobble	Very close	7	***POTENTIALLY CRITICAL*** No observed changes.	D2P52 at D/S end

Table 1. Sacramento River Levee System - Current Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	72.2	Right	317	318		415	Levee toe, Berm slope	Fluvial	None	In (at toe)	4	***CRITICAL*** No observed changes.	D2P521
Sacramento	73	Right			245	15	Levee slope	Scallops	None	Near	0	***POTENTIALLY CRITICAL*** No observed changes. Some sand deposited along toe just downstream.	D2P50
Sacramento	73.5	Left	225	226		300	Full Bank	Fluvial, Mass failure	None	Near	15	Still looks close to being into levee toe. No other observed changes.	D2P49 at middle
Sacramento	74.4	Right	313	314		430	Toe of berm	Toe retreat	None	Near	10-15	Some small pockets in low toe near waterline. No other observed changes.	D2P46 view U/S
Sacramento	75.3	Right	311	312		855	Levee toe, Berm slope	Mass failure, Toe erosion	None	Near	10-15	Lots of small trees down along bank at upstream end. No other observed changes.	D2P45 at D/S end D2P44 at U/S end
Sacramento	77.2	Left	10	11		95	Toe	Fluvial	Concrete rubble	In	10	Site is staked and rock riprap is stockpiled along the top of bank. No other observed changes.	D2P43
Sacramento	78	Left	307	308		335	Berm or Levee slope	Fluvial	None	In or near	3	***POTENTIALLY CRITICAL*** Site is staked and rock riprap is stockpiled along the top of bank. No other observed changes.	D2P42
Sacramento	78.3	Left	305	306		175	Toe of berm	Fluvial	None	Near	5	Site is staked and rock riprap is stockpiled along the top of bank. No other observed changes.	D2P41
Sacramento	78.8	Left	301	302		195	Toe, Berm slope	Fluvial, slow retreat of levee/berm ? slope	None	In or very close	11	Site is staked and rock riprap is stockpiled along the top of bank. No other observed changes.	D2P40 view D/S
Sacramento	85.6	Right	36	35		130	Toe	Toe scour	Cobble	In	0	***CRITICAL- 42F SITE*** No observed changes.	D2P39 at U/S end

Table 1. Sacramento River Levee System - Current Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	86	Left	38	37		500	Toe	Toe scour	Cobble	Near	0-10	No observed changes.	D2P38 view U/S
Sacramento	92.8	Left	43	42		245	Toe	Toe scour	Cobble	In	0-5	No observed changes. Still pretty minor site.	D2P37 view D/S
Sacramento	93.7	Left	45	44		255	Toe, Levee slope	Fluvial, Mass failure	None	Near	5	No observed changes. Lots of berm.	D2P36 view D/S
Sacramento	95.8	Left	481	479		345	Berm		Concrete rubble, rock, bricks, and steel	Near	12	No observed changes.	D2P35 at D/S end
Sacramento	96.2	Left	483	482		275	Berm	Fluvial	None	Near	10	No observed changes.	D2P33 at U/S end D2P34 view U/S
Sacramento	99	Left	48	47		330	Berm or Levee slope	Toe scour	Riprap - handplaced	In or near	3	No observed changes.	D2P31 view U/S D2P32 view U/S at middle
Sacramento	99.3	Right		555	222	30	Whole Bank	Rotational Failure	Rock Riprap	In	4	***CRITICAL*** Recommend upgrade to CRITICAL. Still into mid-slope of levee, but sand deposits and vegetation from last year are gone. No other observed changes.	D2P30 view D/S
Sacramento	99.5	Right	50	49		310	Levee toe, slope	Toe scour and piping	Riprap - handplaced	In	0	***POTENTIALLY CRITICAL*** No observed changes.	D2P29 view D/S
Sacramento	101.3	Right	485	484		65	Toe	Toe Scour	Cobble	In		No observed changes.	D2P28 view U/S
Sacramento	104	Left	492	491		1065	Levee toe, Berm slope	Pocket erosion	Cobble	In or near	11	No observed changes. Still have multiple pockets in toe.	D2P26 view D/S at U/S end D2P27 view U/S at D/S end

Table 1. Sacramento River Levee System - Current Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	104.5	Left	494	493		260	Levee toe, Berm slope	Fluvial	Cobble	In or near	12	No observed changes.	D2P25 view D/S at U/S end
Sacramento	116	Left	22	1		200	Toe and Berm	Fluvial	None	Near	10	No observed changes.	D2P24 view D/S
Sacramento	116.5	Left	502	501		1125	Berm	Localized mass failures	None	In or Near	3	No observed changes.	D2P21 view D/S D2P22 view at middle D2P23 view D/S at D/S end
Sacramento	122	Right			267	30	Lower bank	Mass failure		Near	12	No observed changes.	D2P20
Sacramento	122.3	Right	19	507		100	Whole Bank	Toe scour	None	Near	12	Scallop in bank at upstream end looks worse. No other observed changes.	D2P18 at U/S end D2P 19 at D/S end
Sacramento	123.5	Left			171	100	Toe	Mass failure, scour	None	In	0	***CRITICAL - 42F SITE*** Still steep levee slope with no berm. And erosion into levee toe and mid-slope. No other observed changes.	D2P17
Sacramento	123.7	Right			172	40	Toe	Toe scour	Concrete rubble	Near	5	No observed changes.	D2P16 view U/S
Sacramento	127.9	Right			266	15	Whole bank	Scour		Near	11	No observed changes.	D2P14 at U/S end
Sacramento	130	Left	18	174		170	Levee Toe, Berm Slope	Fluvial	Cobble	In or near	0-20	*** 42F SITE*** Trees look okay and downstream end has some new riprap repair. Site is no longer critical and was removed from that listing.	D2P13

Table 1. Sacramento River Levee System - Current Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	130.8	Right			175	60	Toe, Levee slope	Toe scour	Cobble	In	0	***CRITICAL*** No observed changes.	D2P12
Sacramento	132	Left			221	50	Toe	Eddy erosion	None	In or near	7	NEW SITE - On inside of bend. Erosion of berm toe. Levee slope is steep. Erosion probably due to eddy scour off upstream cobble riprap.	D2P11
Sacramento	133	Left	177	176		280	Toe	Toe scour	Cobble and concrete rubble	Near	10	No observed changes.	D2P9 at U/S end D2P10 at D/S end
Sacramento	133.8	Left			178	30	Toe	Toe scour	Cobble	In		No observed changes. Still small scallops.	D2P8 view U/S
Sacramento	135.3	Right	516	515		970	Toe	Recession	None	Levee is setback	60	No observed changes. Still has large berm.	D2P7 view U/S
Sacramento	136.6	Left	180	179		115	Toe	Toe scour	Cobble	In		No observed changes.	D2P6
Sacramento	136.7	Right			518	30	Pocket, Toe	Mass failure, Fluvial		Near	10	Scallops look a little rawer. Vertical toe with 8-9 feet of depth at toe. No other significant changes.	D2P4 D2P5 view U/S
Sacramento	136.9	Right			264	40	Whole bank	Fluvial, Mass failure	Cobble upstream	Near	10	No observed change. Still slow with resistant wedge of sediment at toe.	D2P2 view U/S
Sacramento	138.1	Left	182	181		370	Toe	Toe scour	Cobble	In		No observed change.	D2P1 view U/S

Table 1. Sacramento River Levee System - Current Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	141.4	Right	185 186	183	263	610	Toe, levee slope	Toe scour, scallops, mass failure	Riprap and cobble	In or near	0	***CRITICAL*** Looks about the same: bad. Some levee work above and silt fences at top of bank at upstream end. Downstream end appears same but old snag from last year is missing.	D1P31 & D1P32 at U/S end D1P33 at D/S end
Sacramento	145.9	Left			369	100	Whole Bank	Fluvial, mass failure	None	In	2	NEW SITE ***CRITICAL*** Currently staked and being monitored by DWR. Vertical bank that has recently lost considerable vegetative cover and erosion is now at or into the levee toe. Large mass failure of bank in future could be problematic.	D1P27 D1P28
Sacramento	154.5	Right	251	16		65	Partially Repaired	Partially Repaired	Cobbles, emergency riprap	Near	7	***CRITICAL*** Currently being REPAIRED. Repairs consist of rock toe/bench with soil fill behind and vegetative sprigging in soil lifts. Large logs (LWD) have been driven into toe area and extend out into water for short distance (probably as fish habitat). STILL CRITICAL since repairs may not be adequate for bank/levee protection. Should continue to monitor this site after repairs are completed.	D1P20, 21, 22, 23 at U/S end D1P24 at D/S end
Sacramento	157.7	Right	204	205		350	Full Bank	Fluvial, Mass Failure	None	Near	15	Erosion is close to levee toe but not into levee section yet. No other significant changes	D1P19
Sacramento	163	Left	260	261		340	Whole bank	Fluvial			20(?)	No observed changes.	D1P17 view D/S
Sacramento	164	Right	194	193		150	Toe	Toe scour	None	In	0	***CRITICAL - 42F SITE*** No observed changes. Still into levee toe.	D1P14
Sacramento	168.3	Left	195	17		120	Berm slope	Toe scour	None	Near	9	No observed changes.	D1P13

Table 1. Sacramento River Levee System - Current Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	177.8	Right	197	196		410	Toe	Toe scour	Cobble	In		Upper bank washout appears to be a worse problem, not just toe. No other observed changes.	D1P7 view D/S D1P8
Sacramento	182	Right	255	256		390	Toe, Lower bank slope	Fluvial, Mass failure	Cobbles	Near	30	Upstream end appears about the same, but downstream end looks worse due to vertical face.	D1P4 view D/S D1P5 at U/S end D1P6 at D/S end
Steamboat	16.2	Right			342	30	Whole Bank	Dry ravel, Wave wash	Riprap	In	0	NEW SITE ***CRITICAL*** Whole sandy levee slope is eroding, is burned, and is near vertical. Little or no rock remains on slope and only a minimal amount remains along toe.	D3P64
Steamboat	16.6	Right			142	125	Levee slope	Fluvial, wavewash	Riprap	In		No observed changes (stake in ground at downstream scallop)	D3P65 at D/S end
Steamboat	18.8	Right		282		160	Levee slope, toe	erosion above riprap	Riprap	In	0	No observed changes.	D4P62
Steamboat	22.7	Right			155	15	Levee slope	Fluvial	None	In		No observed changes.	D4P61
Steamboat	23.2	Left			8	75	Whole Bank	Partially Repaired	Intermittent Concrete Rubble	In	0	No observed changes.	D4P60
Steamboat	23.9	Right	161	160		45	Partially Repaired	Partially Repaired	None	In		No observed changes.	D4P59
Steamboat	24.7	Right	163	162		100	Partially Repaired	Partially Repaired	Riprap	In		Revised - Only the middle 150-200 feet are eroding. No other observed changes.	D4P58

Table 1. Sacramento River Levee System - Current Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Steamboat	25	Left	165	164		105	Partially Repaired	Partially Repaired	None	In		One new small tree has fallen. No other observed changes.	D4P57
Steamboat	26	Left	285	286		100	Berm slope, Toe	Mass failure, Wave wash		In	2	One new small tree has fallen. No other observed changes.	D4P56
Sutter	24.7	Right	166	54		710	Partially Repaired	Partially Repaired	Riprap, dumped from top of bank	In		No observed changes.	D4P3 at D/S end
Sutter	24.8	Left	166	167		275	Levee slope	Mass Failure, Scallops	None	In		No observed changes.	D4P2 at D/S end D4P4 at U/S end
Sutter	25.4	Right	53	550		Unknown	Toe, Berm slope	Slumping	None	In	0-5	Some fresh/clean faces on scallops with a fair amount of berm at mid slope. No other observed changes.	D4P5 at D/S end D4P6 at U/S end
Sutter	26.5	Left	52	51		1 site @ 30m & 2 sites @ 10m	Toe	Toe unraveling	Rock Riprap	In	0	Still looks bad with exposed geotextile fabric. No other observed changes.	D4P7 at D/S end

Table 2. Sacramento River Levee System - Newly Identified Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

2005 SITES NEWLY IDENTIFIED TO DATABASE

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Cache Slough	15.5	Left			366	10	Scallop	Wave wash	New stone failing in places	In	1-2	NEW SITE - Large vertical sections due to wave wash. New stone dumped on bank with geotextile exposed. Cohesive toe has thin weak stratigraphic unit that is washing out. Poor design/construction of stone revetment.	D4P13
Cache Slough	15.9	Left	364	365		300	Toe	Wave wash	New stone failing in places	In	1-2	NEW SITE - Large vertical sections due to wave wash. New stone dumped on bank with geotextile exposed. Cohesive toe has thin weak stratigraphic unit that is washing out.	D4P11 D4P12
Cache Slough	23.6	Right			135	400	Scallops and toe	Wave wash and geotechnical failures	None	In	0	NEW SITE (This site appears on atlas and waypoint is in GPS , but is not in inventory - need to put back into inventory)	D4P10 at D/S end
Sacramento	35.4	Right			273	100	Pocket, Toe	Wave wash, Tree popouts	Riprap	In	0	NEW SITE - Three pockets of erosion into levee section due to popouts or mass failures. Stone is present along waterline. Riprap is present upstream and downstream of site.	D3P40
Sacramento	47.0	Left			246	300	Toe, berm	Fluvial, wave wash	None	In	2-3	NEW SITE - Long reach with eroding vertical silty-sandy berm. Erosion may be into levee toe. No riprap at site but have cobble riprap upstream and rock riprap downstream. Site is just downstream of a stormwater outfall.	D3P27 view D/S
Sacramento	50	Left			239	approx. 450	Toe, berm, pockets	Fluvial, wave wash	None	Near	9-10	NEW SITE - Eroding wide, sandy-silty berm with vertical face in places and erosion pockets into the berm. There is no revetment in the reach, but there is lots of woody debris along the waterline. Apparent reach = RM 50.2 - RM 49.9.	D3P21
Sacramento	52.3	Left			237	30	Toe, pocket	Fluvial or tree popout	None	In	2-3	NEW SITE - Small pocket in short berm, but is near or just into toe of projected levee slope. No revetment upstream or downstream. May be part of USACE identified site at RM 52.4.	D3P18
Sacramento	54.5	Right			235	30	Toe	Fluvial	Riprap	In		NEW SITE - Rock riprap covers levee slope, but is sliding off hard, cohesive, near-vertical toe. Unclear whether tree came out at one spot. Erosion of toe is slow.	D3P14
Sacramento	132	Left			221	50	Toe	Eddy erosion	None	In or near	7	NEW SITE - On inside of bend. Erosion of berm toe. Levee slope is steep. Erosion probably due to eddy scour off upstream cobble riprap.	D2P11
Sacramento	145.9	Left			369	100	Whole Bank	Fluvial, mass failure	None	In	2	NEW SITE ***CRITICAL*** Currently staked and being monitored by DWR. Vertical bank that has recently lost considerable vegetative cover and erosion is now at or into the levee toe. Large mass failure of bank in future could be problematic.	D1P27 D1P28
Steamboat	16.2	Right			342	30	Whole Bank	Dry ravel, Wave wash	Riprap	In	0	NEW SITE ***CRITICAL*** Whole sandy levee slope is eroding, is burned, and is near vertical. Little or no rock remains on slope and only a minimal amount remains along toe.	D3P64

Table 3. Sacramento River Levee System - Removed Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

SITES REMOVED FROM DATABASE IN 2005

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Georgiana Slough	1.2	Left	437	436		140	Toe, Levee slope	Pocket erosion and scour	Rock riprap	In		<u>REPAIRED - REMOVE</u>	D4P18
Georgiana Slough	4.6	Right	463	462		205	Toe	Erosion pockets	None	In		<u>REPAIRED - REMOVE</u>	D4P34
Georgiana Slough	9.1	Left	389	390		85	Repaired	Repaired	None	In		<u>REPAIRED - REMOVE</u>	D4P49
Lower American	1.8	Left					Toe	toe erosion, upper slope failure				<u>REPAIRED - REMOVE</u>	
Lower American	4.2	Left					Levee Slope	erosion of waterside slope				<u>REPAIRED - REMOVE</u>	---
Lower American	6.4	Left					Levee Slope	erosion of waterside slope				<u>REPAIRED - REMOVE</u>	---
Lower American	6.9	Left					Levee Slope	erosion of waterside slope				<u>REPAIRED - REMOVE</u>	---
Lower American	7	Right					Overbank, Toe	erosion of overbank at toe of levee and levee waterside slope				<u>REPAIRED - REMOVE</u>	---
Lower American	7.3	Right					Overbank	Potential for large overbank scour hole				<u>REPAIRED - REMOVE</u>	---
Lower American	10	Left					Slope, Toe	slope and toe erosion, then slope failure				<u>REPAIRED - REMOVE</u>	---
Lower American	10.2	Right					Overbank, Levee Slope	erosion of overbank and waterside levee slope				<u>REPAIRED - REMOVE</u>	---
Sacramento	11	Left			15	50	Whole Bank	Wave Wash and Slumping	Rock Riprap at beach margin	In		<u>REPAIRED - REMOVE</u>	D4P14

Table 3. Sacramento River Levee System - Removed Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	26.1	Right	101	100		95	Levee slope	Fluvial	Riprap	In		REPAIRED - REMOVE	D3P50
Sacramento	26.4	Right			275	150	Middle, Toe	Wave wash, Slope failure	None	In	0	No observed change. RECOMMEND REMOVING	D3P49 just D/S of WPT D3P48 at old site
Sacramento	31.4	Right	233	362		140	Toe, Partially Repaired	Partially Repaired	Rock Riprap	In		REPAIRED - REMOVE	D3P44 view U/S
Sacramento	50.8	Left				1000	Berm, Levee toe		Cobbles		0	Does not appear to be a critical site nor a problem site. RECOMMEND REMOVING	No Photo
Sacramento	52.4	Left										REPAIRED - REMOVE	D3P17
Sacramento	74	Right	315	316		1215	Berm	Deep-seated rotational failure, scallops	None	Near	10-15	No observed changes. RECOMMEND REMOVING this site since there is 50 to 100 feet of berm and is on inside of bend.	D2P47 view U/S
Sacramento	125.8	Left			173	50	Levee slope	erosion, high flows	Riprap	In		REPAIRED - REMOVE	D2P15
Sacramento	164.3	Right			257	30	Whole bank	Fluvial, Mass failure		Near	10	No further erosion activity over the years of observation. RECOMMEND REMOVING	D1P16

Table 3. Sacramento River Levee System - Removed Erosion Sites

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	164.4	Right	258	259		610	Whole bank	Fluvial			6	No further erosion activity over the years of observation. RECOMMEND REMOVING	D1P15 view D/S
Sacramento	192.4	Left	249	252	248	290	Whole bank	Mass failure		Private Levee is set back	10	No observed changes except a small bit of erosion on the backside of the bar. RECOMMEND REMOVING - This site is above the limits of the flood control project.	D1P1 view D/S

Table 4. Sacramento River Levee System - Potentially Critical and Critical Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

SITES POTENTIALLY CRITICAL & CRITICAL FROM DATABASE IN 2005

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Bear	2.4	Left	115*	114*		152	Berm	Toe Erosion, Upper Bank Slope	None	Near	50	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Part of existing site; Sandy banks are actively eroding and has worsened since last year.)	---
Bear	10.1	Right	116*	117*		213	Berm	Toe Erosion, Upper Bank Slope	None	Near	0	***CRITICAL*** DID NOT OBSERVE. (2002 Note: No berm; 1;1 OR 1.5:1 slope from toe of levee to river bottom; No rock protection.)	---
Cache Creek	LM 0.8	Left			76*	350	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	60	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Erosion extends 150' US and 200' DS of Wpt.)	---
Cache Creek	LM 1.1	Left			85*	525	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	90	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Erosion extends 150' US and 375' DS of Wpt.)	---
Cache Creek	LM 2.4	Left			86*	570	Bank Slope	Toe Erosion, Upper Bank Collapse	None	Near	90	***CRITICAL*** DID NOT OBSERVE. (2002 Note: Erosion extends 240' US and 3300' DS of Wpt.)	---
Cache Slough	21.8	Right	551	552	363	485	Whole Bank and toe	Rotational failure, fluvial toe erosion	None	In	0	***CRITICAL*** Reach is not 485m long, mainly numerous small pockets. Still looks bad. No grass on levee slopes now (has been graded).	D4P9 at 10m pocket at WPT
Feather	17.8	Left			553	75-100	Whole Bank	Fluvial, Slope failures	None	Near	>50	***POTENTIALLY CRITICAL*** Some new slumping. Actively eroding wide berm which is >50 feet wide.	D5P6 D5P7
Feather	19.7	Left			554	100	Whole Bank	Fluvial, Slope failures	None	Near	>50	***POTENTIALLY CRITICAL*** No observed changes (large berm)	D5P8
Sacramento	20.8	Left	472	473		120	Partially Repaired	Partially Repaired	None	In		***POTENTIALLY CRITICAL*** Some new erosion into levee section. No other observed changes.	D3P62 at U/S end
Sacramento	26.5	Left	103	102		140	Toe, Levee slope	Toe scour	Riprap	In		***POTENTIALLY CRITICAL*** No observed changes.	D3P 46 at U/S end D3P47 at D/S end
Sacramento	26.9	Left	105	104		85	Toe	Toe scour	Cobble	In	0	***CRITICAL- 42F SITE*** Currently trimming trees and clearing bank. Still looks bad.	D3P45

Table 4. Sacramento River Levee System - Potentially Critical and Critical Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

SITES POTENTIALLY CRITICAL & CRITICAL FROM DATABASE IN 2005

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	32.5	Right	276	277		565	Toe, Levee slope	Fluvial, Mass failure	Intermittent rock riprap, concrete rubble	In	0	***CRITICAL*** Looks worse at the upstream end because of road work along the top of the slope. Downstream end appears about the same. No other observed changes at downstream end.	D3P42 at U/S end
Sacramento	34.5	Right	231	232		130	Partially Repaired	Partially Repaired	Concrete rubble	In		***CRITICAL*** Upstream end has been repaired, but rock is sliding off the cohesive bench at the waterline. Downstream end is not repaired.	See 2004 D3P34
Sacramento	49.6	Left			39	50	Toe, Berm	Fluvial	None	Near	3	***CRITICAL*** No observed changes.	See 2004 D3P21
Sacramento	49.9	Left			198	10	Repaired	Repaired	Riprap	In		***CRITICAL*** No observed changes. Consists mainly of undercut trees with rock riprap upstream and downstream.	D3P23
Sacramento	50.2	Left	357	358		200	Berm	Fluvial	None	Near	7-10	***CRITICAL*** Slow erosion, but still have significant berm width. No other observed changes.	D3P22
Sacramento	50.4	Left										***CRITICAL*** DID NOT OBSERVE. USACE identified site.	---
Sacramento	51.5	Left	270	271		400	Berm, Levee toe	Fluvial		In or near	2	***POTENTIALLY CRITICAL*** Several trees at downstream end have root masses almost completely exposed, but have wide berm (>10m) at downstream end as well. No other observed changes.	D3P19
Sacramento	53.1	Left		355		20	Levee slope (upper) and toe	Fluvial	None (Rock riprap U/S and D/S)	In	0-10	***POTENTIALLY CRITICAL*** No observed changes. Stone bench exposed at waterline.	D3P16

Table 4. Sacramento River Levee System - Potentially Critical and Critical Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

SITES POTENTIALLY CRITICAL & CRITICAL FROM DATABASE IN 2005

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	56.7	Left	347	348		510	Structural problem	Fluvial	Rock, concrete, and cobble	In		***CRITICAL*** PLANS AND SPECS DEVELOPED Under repair still. Slope toe is protected by riprap with LWD on bench, but upper slope is still unprotected.	D3P7 view U/S
Sacramento	56.8	Right	345	346		225	Toe, Levee slope	Fluvial, shelf retreat	None	In or near	0	***POTENTIALLY CRITICAL*** Looks worse. Tree has fallen and erosion is into levee toe and possibly as high as mid slope.	D3P6 D3P7 at D/S end
Sacramento	69.9	Right	325	326		610	Toe, Levee slope	Fluvial	None	In (at U/S end)		***CRITICAL*** No observed changes.	D2P55 at U/S end
Sacramento	71.7	Right	319	320		170	Berm	Fluvial	Cobble	Very close	7	***POTENTIALLY CRITICAL*** No observed changes.	D2P52 at D/S end
Sacramento	72.2	Right	317	318		415	Levee toe, Berm slope	Fluvial	None	In (at toe)	4	***CRITICAL*** No observed changes.	D2P521
Sacramento	73	Right			245	15	Levee slope	Scallops	None	Near	0	***POTENTIALLY CRITICAL*** No observed changes. Some sand deposited along toe just downstream.	D2P50
Sacramento	78	Left	307	308		335	Berm or Levee slope	Fluvial	None	In or near	3	***POTENTIALLY CRITICAL*** Site is staked and rock riprap is stored along the top of bank. No other observed changes.	D2P42
Sacramento	85.6	Right	36	35		130	Toe	Toe scour	Cobble	In	0	***CRITICAL- 42F SITE*** No observed changes.	D2P39 at U/S end

Table 4. Sacramento River Levee System - Potentially Critical and Critical Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

SITES POTENTIALLY CRITICAL & CRITICAL FROM DATABASE IN 2005

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	99.3	Right		555	222	30	Whole Bank	Rotational Failure	Rock Riprap	In	4	***CRITICAL*** Recommend upgrade to CRITICAL. Still into mid-slope of levee and sand deposits and vegetation from last year are gone. No other observed changes.	D2P30 view D/S
Sacramento	99.5	Right	50	49		310	Levee toe, slope	Toe scour and piping	Riprap - handplaced	In	0	***POTENTIALLY CRITICAL*** No observed changes.	D2P29 view D/S
Sacramento	123.5	Left			171	100	Toe	Mass failure, scour	None	In	0	***CRITICAL - 42F SITE*** Still steep levee slope with no berm. And erosion into levee toe and mid-slope. No other observed changes.	D2P17
Sacramento	130.8	Right			175	60	Toe, Levee slope	Toe scour	Cobble	In	0	***CRITICAL*** No observed changes.	D2P12
Sacramento	141.4	Right	185 186	183	263	610	Toe, levee slope	Toe scour, scallops, mass failure	Riprap and cobble	In or near	0	***CRITICAL*** Looks about the same: bad. Some levee work above and silt fences at top of bank at upstream end. Downstream end appears same but old snag from last year is missing.	D1P31 & D1P32 at U/S end D1P33 at D/S end
Sacramento	145.9	Left			369	100	Whole Bank	Fluvial, mass failure	None	In	2	NEW SITE ***CRITICAL*** Currently staked and being monitored by DWR. Vertical bank that has recently lost considerable vegetative cover and erosion is now at or into the levee toe. Large mass failure of bank in future could be problematic.	D1P27 D1P28
Sacramento	154.5	Right	251	16		65	Partially Repaired	Partially Repaired	Cobbles, emergency riprap	Near	7	***CRITICAL*** Currently being REPAIRED. Repairs consist of rock toe/bench with soil fill behind and vegetative sprigging in soil lifts. Large logs (LWD) have been driven into toe area and extend out into water for short distance (probably as fish habitat). STILL CRITICAL since repairs may not be adequate for bank/levee protection. Should continue to monitor this site after repairs are completed.	D1P20, 21, 22, 23 at U/S end D1P24 at D/S end

Table 4. Sacramento River Levee System - Potentially Critical and Critical Erosion Sites

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

SITES POTENTIALLY CRITICAL & CRITICAL FROM DATABASE IN 2005

River	River Mile	Bank	U/S WPT	D/S WPT	Mid WPT	Est. Length (m)	Erosion Location	Erosion Mechanism	Revetment Type	Proximity to Levee	Min. Berm Width (m)	2005 Recon Comments	2005 Photo #
Sacramento	164	Right	194	193		150	Toe	Toe scour	None	In	0	***CRITICAL - 42F SITE*** No observed changes. Still into levee toe.	D1P14
Steamboat	16.2	Right			342	30	Whole Bank	Dry ravel, Wave wash	Riprap	In	0	NEW SITE ***CRITICAL*** Whole sandy levee slope is eroding, is burned, and is near vertical. Little or no rock remains on slope and only a minimal amount remains along toe.	D3P64

Table 5. Sacramento River Levee System - Waypoint Locations

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

2005 Waypoint Locations

River	River Mile	Bank	U/S WPT	Upstream Wpt		D/S WPT	Downstream Wpt		Mid WPT	Middle Wpt	
				Northing	Easting		Northing	Easting		Northing	Easting
Bear	2.4	Left	115*	38.95898	121.54699	114*	38.95628	121.54794			
Bear	9.9	Right	117*	38.99522	121.42987	118*	38.99439	121.4334			
Bear	10.1	Right	116*	38.9955	121.42967	117*	38.95898	121.54699			
Cache Creek	LM 0.8	Right	75*	38.73206	121.79795	72*	38.76204	121.79708			
Cache Creek	LM 0.8	Left							76*	38.71782	121.81584
Cache Creek	LM 1.1	Left							85*	38.7212	121.81223
Cache Creek	LM 1.8	Right	68*	38.73232	121.78609	63*	38.7294	121.78508			
Cache Creek	LM 2.4	Left							86*	38.73326	121.79893
Cache Creek	LM 2.8	Left	87*	38.73418	121.79346						
Cache Creek	LM 3.4	Left							106	38.73262	121.78493
Cache Creek	LM 3.6	Right							62*	38.72293	121.75972
Cache Creek	LM 3.9	Left							107*	38.72793	121.78054
Cache Creek	LM 4.2	Left							112*	38.72725	121.7752
Cache Slough	15.5	Left							366	38.1955333	121.6555
Cache Slough	15.9	Left	364	38.2000333	121.6560166	365	38.1972166	121.6558833			
Cache Slough	21.8	Right	551	N38.27250000	W121.70870000	552	N38.26952000	W121.70460000	363	38.2695	121.7044333
Cache Slough	23.6	Right							135	N38.28838061	W121.72419592
Elk Slough		Both							40 &	N38.33565193	W121.58325380
Feather	0.6	Left							522	N38.79311785	W121.62820349
Feather	1	Left	531	N38.80096450	W121.63310677				532	N38.79792991	W121.63283637
Feather	3.5	Left							217	N38.83283	W121.63575
Feather	5	Left	13	N38.85366289	W121.62930313	12	N38.85230115	W121.62960958	60	N38.85105171	W121.63000617
Feather	7	Left	526	N38.87969924	W121.61221377				525	N38.87859763	W121.61263740
Feather	17.8	Left							553	N39.00848	W121.57933
Feather	19.7	Left							554	N39.02258	W121.59358
Feather	37.9	Right									
Georgiana Slough	0.3	Left	432	N38.13003409	W121.58657072	431	N38.13033187	W121.58226233			
Georgiana Slough	1.2	Left	437	N38.13895279	W121.59635023	436	N38.13786814	W121.59566522			
Georgiana Slough	1.7	Left	441	N38.14355351	W121.59978433	440	N38.14025010	W121.59705328			
Georgiana Slough	2.3	Left	444	N38.15110259	W121.59596266	442	N38.14593528	W121.60068567	443	N38.14999686	W121.59786448
Georgiana Slough	2.5	Left	446	N38.15088287	W121.59373636	445	N38.15118056	W121.59473684			
Georgiana Slough	3.6	Left	450	N38.15614906	W121.59173539	449	N38.15296671	W121.59120360			
Georgiana Slough	3.7	Left	452	N38.15686489	W121.59118557	451	N38.15660266	W121.59140189			
Georgiana Slough	3.7	Left							453	N38.15708460	W121.59068082
Georgiana Slough	4	Left	455	N38.15708460	W121.58743601	454	N38.15723344	W121.58896828			
Georgiana Slough	4.3	Left	458	N38.15991950	W121.58524576	456	N38.15766576	W121.58653467	457	N38.15893439	W121.58578656
Georgiana Slough	4.5	Left	460			368			459	N38.16168417	W121.58461482
Georgiana Slough	4.6	Left	461	N38.16448346	W121.58311860	460	N38.16200309	W121.58439850			
Georgiana Slough	4.6	Right	463	N38.16505040	W121.58347012	462	N38.16328581	W121.58411909			
Georgiana Slough	5.3	Left	465	N38.17609760	W121.58016222	464	N38.16793459	W121.58166745			
Georgiana Slough	6.1	Left	416	N38.18216966	W121.57004921	417	N38.18146825	W121.57623239			
Georgiana Slough	6.4	Left	413	N38.18336701	W121.56794910	415	N38.18298442	W121.56858904			
Georgiana Slough	6.6	Left	411	N38.18558453	W121.56331622	412	N38.18516653	W121.56459612			

Table 5. Sacramento River Levee System - Waypoint Locations

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

2005 Waypoint Locations

River	River Mile	Bank	U/S WPT	Upstream Wpt		D/S WPT	Downstream Wpt		Mid WPT	Middle Wpt	
				Northing	Easting		Northing	Easting		Northing	Easting
Georgiana Slough	6.8	Left	409	N38.18791533	W121.55888164	410	N38.18601669	W121.56176592			
Georgiana Slough	7	Right	407	N38.18970058	W121.55774596	408	N38.18853167	W121.55893572			
Georgiana Slough	7.3	Left	404	N38.19089780	W121.55468141	405	N38.19018230	W121.55633086			
Georgiana Slough	7.7	Right							403	N38.19424851	W121.55065243
Georgiana Slough	8.1	Right	399	N38.19849865	W121.54604660	400	N38.19789656	W121.54647924			
Georgiana Slough	8.3	Left	397	N38.20080071	W121.54253138	398	N38.20072988	W121.54283784			
Georgiana Slough	8.4	Left	395	N38.20344976	W121.54025100	396	N38.20111945	W121.54180130			
Georgiana Slough	8.7	Left	393	N38.20464675	W121.54062055	394	N38.20438469	W121.54053041			
Georgiana Slough	9.1	Left	389	N38.21053230	W121.53744784	390	N38.21033400	W121.53823200			
Georgiana Slough	9.3	Left	387	N38.21366964	W121.53750192	388	N38.21180000	W121.53563615			
Georgiana Slough	10.3	Left	381	N38.22301714	W121.54221592	382	N38.22289676	W121.54306317			
Georgiana Slough	10.4	Left	379	N38.22354821	W121.53778134	380	N38.22338535	W121.53852945			
Georgiana Slough	10.6	Left	377	N38.22415009	W121.53523055	378	N38.22391642	W121.53624906			
Georgiana Slough	10.9	Left	375	N38.22723020	W121.53133677	376	N38.22664959	W121.53236430			
Georgiana Slough	11.6	Left	373	N38.22988537	W121.52343205	374	N38.22863214	W121.52484715			
Sacramento	8	Left							243	N38.08883653	W121.70699840
Sacramento	10.8	Left	216	38.13055	121.6876333	214	38.1289166	121.6882166			
Sacramento	20.8	Left	472	N38.19321427	W121.56510087	473	N38.19228627	W121.56786797			
Sacramento	21.5	Left	470	N38.20068738	W121.55777300	471	N38.20027656	W121.55785412			
Sacramento	22.5	Left	293	N38.21330847	W121.55725022	292	N38.21099264	W121.55721417			
Sacramento	22.7	Left	295	N38.21871886	W121.55688067	294	N38.21811694	W121.55692574			
Sacramento	23.2	Left	297	N38.22460326	W121.55580808	296	N38.22332162	W121.55580808			
Sacramento	23.3	Left	299	N38.22723728	W121.55568189	298	N38.22676996	W121.55570893			
Sacramento	24.8	Left	534	N38.24061833	W121.54492894	300	N38.24095813	W121.54660543			
Sacramento	25.2	Left	536	N38.23900424	W121.53719547	56	N38.23940776	W121.53868267	535	N38.23923786	W121.53783542
Sacramento	26	Left	466	N38.23903256	W121.52296335	467	N38.23796356	W121.52921863			
Sacramento	26.1	Right	101	N38.23974757	W121.52260282	100	N38.23959891	W121.52364837			
Sacramento	26.4	Right							275	N38.2397833	W121.5199
Sacramento	26.5	Left	103	N38.24148200	W121.51510369	102	N38.24046967	W121.51603207			
Sacramento	26.9	Left	105	N38.24446935	W121.51214730	104	N38.24386764	W121.51271515			
Sacramento	31.4	Right	233	N38.29310630	W121.56356860	362	N38.29213006	W121.56266726			
Sacramento	31.6	Right	236	N38.29583687	W121.56625458	238	N38.29417449	W121.56462316			
Sacramento	32.5	Right	276	N38.30991254	W121.57712471	277	N38.30545672	W121.57412326			
Sacramento	33	Right				557	N38.31102000	W121.57771000	274	N38.3135666	W121.5781500
Sacramento	34.5	Right	231	N38.33603371	W121.56820147	232	N38.33503684	W121.56896761			
Sacramento	35.4	Left	250			247/55	N38.34270000	W121.57567000			
Sacramento	35.4	Right							273	N38.3436166	W121.5594000
Sacramento	38.5	Right	219	N38.37171411	W121.52313460	218	N38.37091560	W121.52298138			
Sacramento	41.9	Right	360	N38.41768112	W121.52486517	215	N38.41448196	W121.52270196			
Sacramento	43.3	Right	210	N38.43513625	W121.52984957	213	N38.43276396	W121.53259865			
Sacramento	43.7	Right	208	N38.43538336	W121.52326981	209	N38.43575050	W121.52680305			
Sacramento	44.7	Right	206	N38.43850393	W121.50636072	207	N38.43626589	W121.51136314			
Sacramento	47	Left							246	N38.4706666	W121.5047166
Sacramento	47.9	Right	202	N38.47353400	W121.52052073						

Table 5. Sacramento River Levee System - Waypoint Locations

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

2005 Waypoint Locations

River	River Mile	Bank	U/S WPT	Upstream Wpt		D/S WPT	Downstream Wpt		Mid WPT	Middle Wpt	
				Northing	Easting		Northing	Easting		Northing	Easting
Sacramento	48.2	Right							201	N38.47343521	W121.52413509
Sacramento	49.6	Left							39	N38.48038556	W121.54565902
Sacramento	49.7	Left							359	N38.48150038	W121.54651529
Sacramento	49.9	Left							198	N38.48394868	W121.54811967
Sacramento	50	Left							239	N38.4869333	W121.5506666
Sacramento	50.2	Left	357	N38.48969164	W121.55252721	358	N38.48761746	W121.55091382			
Sacramento	51.1	Left							25	N38.50028739	W121.55842196
Sacramento	51.5	Left	270	N38.50664974	W121.55663731	271	N38.50313712	W121.55753865			
Sacramento	52.3								237	N38.5151500	W121.5448666
Sacramento	53.1	Left				355	N38.51731352	W121.52839841			
Sacramento	53.5	Right	23	N38.52095944	W121.52477504	5	N38.51991575	W121.52500939			
Sacramento	54.5	Right							235	N38.5285000	W121.5314833
Sacramento	55.2	Left	353	N38.53673278	W121.51641063	354	N38.53608415	W121.51703255			
Sacramento	55.8	Right	351	N38.54326815	W121.51223744	352	N38.54121666	W121.51333707			
Sacramento	56.5	Right	349	N38.55131846	W121.51426545	350	N38.55036685	W121.51398603			
Sacramento	56.6	Left							269	N38.55209383	W121.51281429
Sacramento	56.7	Left	347	N38.55738026	W121.51475217	348	N38.55305247	W121.51320187			
Sacramento	56.8	Right	345	N38.55626662	W121.51577969	346	N38.55436352	W121.51514876			
Sacramento	57	Right				344	N38.55778202	W121.51661794			
Sacramento	60	Left	337	N38.59329656	W121.50728008	338	N38.59276819	W121.50680237			
Sacramento	62.5	Right							334	N38.59714995	W121.54813770
Sacramento	62.9	Right	332	N38.60160189	W121.55299591	333	N38.60121447	W121.55268044			
Sacramento	63	Right							331	N38.60218653	W121.55371698
Sacramento	69.9	Right	325	N38.66900221	W121.62171387	326	N38.66568050	W121.61639597			
Sacramento	70.7	Right	323	N38.67797428	W121.63155647	324	N38.67387189	W121.62793309			
Sacramento	71.3	Right	321	N38.68410278	W121.63408021	322	N38.68276596	W121.63374672			
Sacramento	71.7	Right	319	N38.69061771	W121.63529702	320	N38.68906994	W121.63509872			
Sacramento	72.2	Right	317	N38.69841935	W121.63066414	318	N38.69536633	W121.63307071			
Sacramento	73	Right							245	N38.70429289	W121.62207440
Sacramento	73.5	Left	225	N38.7102500	W121.6128333	226	N38.7093500	W121.6141166			
Sacramento	74	Right	315	N38.71594709	W121.60908613	316	N38.70770425	W121.61818062			
Sacramento	74.4	Right	313	N38.72146758	W121.60618382	314	N38.71791624	W121.60713924			
Sacramento	75.3	Right	311	N38.73645163	W121.60396653	312	N38.72891429	W121.60576921			
Sacramento	77.2	Left	10	N38.76045048	W121.59233027	11	N38.75963519	W121.59233027			
Sacramento	78	Left	307	N38.77091495	W121.59605279	308	N38.76838506	W121.59491711			
Sacramento	78.3	Left	305	N38.77470258	W121.59903622	306	N38.77310744	W121.59796363			
Sacramento	78.8	Left	301	N38.77876404	W121.60284888	302	N38.77758357	W121.60147884			
Sacramento	85.6	Right	36	N38.76671951	W121.69205423	35	N38.76583400	W121.69115289			
Sacramento	86	Left	38	N38.77439339	W121.68615948	37	N38.77050033	W121.69046787			
Sacramento	92.8	Left	43	N38.84045860	W121.72676473	42	N38.83959508	W121.72963999			
Sacramento	93.7	Left	45	N38.85228010	W121.72360103	44	N38.85026553	W121.72383538			
Sacramento	95.8	Left	481	N38.87042971	W121.75240777	479	N38.87228231	W121.74948744			
Sacramento	96.2	Left	483	N38.86932093	W121.75599510	482	N38.87036655	W121.75321898			
Sacramento	99	Left	48	N38.86183975	W121.78407175	47	N38.85841471	W121.78395458			

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2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

2005 Waypoint Locations

River	River Mile	Bank	U/S WPT	Upstream Wpt		D/S WPT	Downstream Wpt		Mid WPT	Middle Wpt	
				Northing	Easting		Northing	Easting		Northing	Easting
Sacramento	99.3	Right				555	N38.86365000	W121.78642000	222		
Sacramento	99.5	Right	50	N38.86284337	W121.79222885	49	N38.86306094	W121.79060645			
Sacramento	101.3	Right	485	N38.87517339	W121.81354548	484	N38.87496990	W121.81309481			
Sacramento	104	Left	492	N38.90285025	W121.79084981	491	N38.90118083	W121.80136842			
Sacramento	104.5	Left	494	N38.90677816	W121.79199451	493	N38.90435130	W121.79040815			
Sacramento	116	Left	22	N39.00114383	W121.80266634	1	N38.99969386	W121.80081860			
Sacramento	116.5	Left	502	N39.00632000	W121.8137000	501	N39.00331522	W121.80518107			
Sacramento	122	Right							267	N39.06391913	W121.83867477
Sacramento	122.3	Right	19	N39.06652948	W121.84377633	507	N39.06610259	W121.84274881			
Sacramento	123.5	Left							171	N39.06848193	W121.86201940
Sacramento	123.7	Right							172	N39.06707533	W121.86686860
Sacramento	125.8	Left							173	N39.08031442	W121.89089825
Sacramento	127.9	Right							266	N39.10077694	W121.90412087
Sacramento	130	Left	18	N39.12212159	W121.90979929	174	N39.12088389	W121.90928553			
Sacramento	130.8	Right							175	N39.12176497	W121.92041705
Sacramento	132	Left							221	N39.1320000	W121.9365666
Sacramento	133	Left	177	N39.14258596	W121.93308083	176	N39.14380231	W121.93592906			
Sacramento	133.8	Left							178	N39.14229934	W121.91856930
Sacramento	135.3	Right	516	N39.16143001	W121.93468521	515	N39.15966185	W121.93270227			
Sacramento	136.6	Left	180	N39.17384783	W121.93868715	179	N39.17288355	W121.93821846			
Sacramento	136.7	Right							518	N39.17547589	W121.94102162
Sacramento	136.9	Right							264	N39.17887862	W121.94486131
Sacramento	138.1	Left	182	N39.19315154	W121.93574879	181	N39.19035028	W121.93445087			
Sacramento	141.4	Right	185	N39.19268350	W121.98674646	183	N39.19011974	W121.98103198	263	N39.19055287	W121.98338447
Sacramento	141.4	Right	186	N39.19363354	W121.98766582						
Sacramento	145.9	Left							369	N39.23043	W121.99844
Sacramento	154.5	Right	251	N39.29787051	W122.02617996	16	N39.29794724	W122.02452150			
Sacramento	157.7	Right	204	N39.33256	W122.02975	205	N39.33161	W122.02947			
Sacramento	163	Left	260	N39.39945212	W122.00359245	261	N39.39654070	W122.00278125			
Sacramento	164	Right	194	N39.40698784	W122.00816223	193	N39.40547658	W122.00808111			
Sacramento	164.3	Right							257	N39.41018435	W122.00891034
Sacramento	164.4	Right	258	N39.41781639	W122.01037051	259	N39.41243366	W122.00921680			
Sacramento	168.3	Left	195	N39.45520547	W121.99429065	17	N39.45312457	W121.99390308			
Sacramento	177.8	Right	197	N39.55736427	W122.00356541	196	N39.55386873	W122.00228551			
Sacramento	182	Right	255	N39.60633186	W121.99461513	256	N39.60282490	W121.99662511			
Sacramento	192.4	Left	249	N39.68975188	W121.94304061	252	N39.68638788	W121.95208102	248	N39.68697052	W121.94416728
Steamboat	16.2	Right							342	N38.1917666	W121.6383166
Steamboat	16.6	Right							142	N38.19447519	W121.63268314
Steamboat	18.8	Right				282	N38.21196997	W121.60944666			
Steamboat	22.7	Right							155	N38.26224935	W121.59271784
Steamboat	23.2	Left							8	N38.26919879	W121.58901335
Steamboat	23.9	Right	161	N38.27888585	W121.58938290	160	N38.27814999	W121.58999581			
Steamboat	24.7	Right	163	N38.28680295	W121.58436245	162	N38.28646336	W121.58481312			
Steamboat	25	Left	165	N38.29421693	W121.58246964	164	N38.29130000	W121.58334000			

Table 5. Sacramento River Levee System - Waypoint Locations

2005 SACRAMENTO RIVER RECONNAISSANCE EROSION INVENTORY

2005 Waypoint Locations

River	River Mile	Bank	U/S WPT	Upstream Wpt		D/S WPT	Downstream Wpt		Mid WPT	Middle Wpt	
				Northing	Easting		Northing	Easting		Northing	Easting
Steamboat	26	Left	285	N38.30315090	W121.57744018	286	N38.30257090	W121.57827842			
Sutter	24.7	Right	166	N38.29548317	W121.60500307	54	N38.29075057	W121.60414680			
Sutter	24.8	Left	166	N38.29548317	W121.60500307	167	N38.29314874	W121.60424595			
Sutter	25.4	Right	53	N38.30163015	W121.60022598	550	N38.29947000	W121.60277000			
Sutter	26.5	Left	52	N38.31477120	W121.59184355	51	N38.31415593	W121.59215902			